

Serial No. 09/730,461
October 30, 2003
Reply to the Office Action dated May 6, 2003
Page 9 of 13

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application.

Claims 1-10, 12-13, and 15-20 were rejected under U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent No. 5,780,740). Claims 11 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. in view of Yamashita et al. (U.S. Patent No. 5,952,572). Applicant respectfully traverses the rejections of claims 1-20.

Claim 1 recites:

"A resonant element comprising:
a substrate defining orthogonal X- and Y-directions and further defining a Z-direction orthogonal to both the X- and Y-directions;
a vibrating body opposed to the substrate and vibratable in the orthogonal X-and Z-directions;
a vibration exciting member for causing said vibrating body to be subjected to an excitation vibration in the X-direction;
a detecting electrode disposed on the substrate for detecting any deflection of said vibrating body in the Z-direction during the excitation vibration thereof in the X-direction; and
a first conductive portion disposed on the substrate on one side of the detecting electrode and a second conductive portion disposed on the substrate on the other side of the detecting electrode for inhibiting the deflection of said vibrating body in the Z-direction." (Emphasis added)

Claim 16 recites:

"A resonant element comprising:
a substrate defining orthogonal X- and Y-directions and further defining a Z-direction orthogonal to both the X- and Y-directions;
a vibrating body opposed to the substrate and vibratable in the orthogonal X-and Z-directions;
a vibration exciting member for causing said vibrating body to be subjected to an excitation vibration in the X-direction;
a detecting electrode disposed on the substrate for detecting any deflection of said vibrating body in the Z-direction during the excitation vibration thereof in the X-direction; and
at least one conductive portion disposed on the substrate for inhibiting the deflection of said vibrating body in the Z-direction;

Serial No. 09/730,461
October 30, 2003
Reply to the Office Action dated May 6, 2003
Page 10 of 13

wherein the vibrating body is supported by hooked-claw shaped beams which contact the substrate in a region exterior to a region defined by the vibrating body and the vibration exciting member." (Emphasis added)

Claims 9, 12 and 15 recite features that are similar to the features recited in claim 1, including the emphasized features.

With respect to claims 1, 9, 12 and 15, the Examiner admitted in the paragraph bridging pages 2 and 3 of the outstanding Office Action that Lee et al. fails to teach or suggest the feature of first and second conductive portions on each side of the detecting electrode. The Examiner alleged in the paragraph bridging pages 2 and 3 of the outstanding Office Action that "duplication and placement of a component is a design consideration clearly within the preview [sic] of one of ordinary skill in the art." The Examiner further alleged in the paragraph bridging pages 2 and 3 of the outstanding Office Action that "it would have been obvious to one of ordinary skill in the art to provide Lee et al. with two controlling electrodes ... so that the device provides an enhanced damping means to prevent vibration in the Z-direction."

With respect to claim 16, the Examiner admitted in the first paragraph on page 4 of the outstanding Office Action that Lee et al. does not teach or suggest the feature of hook-claw shaped beams. The Examiner alleged in the first paragraph on page 4 of the outstanding Office Action that "the shape of an object is a design consideration clearly within the preview [sic] of one of ordinary skill in the art."

First, contrary to the Examiner's allegations, the present claimed invention requires **much** more than a mere duplication of parts. Particularly, the present claimed invention requires that the conductive portions be uniquely arranged to function very differently from the prior art, i.e. "a first conductive portion **disposed on the substrate on one side of the detecting electrode** and a second conductive portion **disposed on the substrate on the other side of the detecting electrode** for inhibiting the deflection of said vibrating body in the Z-direction." Furthermore, Lee et al. fails to

Serial No. 09/730,461
October 30, 2003
Reply to the Office Action dated May 6, 2003
Page 11 of 13

teach or suggest any hooked-claw shaped beams, and certainly fails to teach or suggest "the vibrating body is supported by hooked-claw shaped beams which contact the substrate in a region exterior to a region defined by the vibrating body and the vibration exciting member" as recited in the present claimed invention. Since Lee et al. fails to teach or suggest any hooked-claw shaped beams, this deficiency clearly cannot be overcome by an alleged mere duplication of parts or "a design consideration clearly within the preview [sic] of one of ordinary skill in the art" as alleged by the Examiner.

Second, the Examiner is reminded that prior art rejections must be based on evidence. Graham v. John Deere Co., 383 U.S. 117 (1966). The Examiner has failed to provide any evidence that suggests that Lee et al. could or should be modified to include two conductive portions or hook-claw shaped beams as recited in Applicant's claimed invention. Furthermore, contrary to the Examiner's allegation, Lee et al. neither teaches nor suggest that two conductive portions would "provide an enhanced damping means to prevent vibration in the Z-direction." Thus, Applicant respectfully submit that there would have been absolutely no motivation to modify Lee et al. as alleged by the Examiner. Therefore, the Examiner has failed to establish a prima facie case of obviousness since the reference offers no suggestion of the claimed combination. See In re Nielson, 816 F.2d 1567, 2 USPQ 2d 1525, 1528 (Fed. Cir. 1987).

Third, the Examiner is reminded that the U.S. Patent Office Board of Patent Appeals and Interferences has concluded that a rejection on the basis of design choice is clearly improper. See In re Garrett, Appeal No. 580-81 (BPAI 1986) (wherein in reversing an obviousness rejection, the Board criticized that the Examiner's statement that the proposed modification would have been an obvious matter of engineering design choice with the explanation that such an assertion is a conclusion, not a reason).

With respect to claims 12 and 15, as argued in the previous Amendment dated December 20, 2002, the Examiner has completely failed to consider or address the step of "controlling said electrostatic attractive forces provided to said vibrating body by said

Serial No. 09/730,461
October 30, 2003
Reply to the Office Action dated May 6, 2003
Page 12 of 13

first and second conductive portions in a direction such that the variation in the detected electrostatic capacity by said detecting electrode is canceled," and Lee et al. clearly fails to teach or suggest this feature.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 9, 12, 15, and 16 under U.S.C. 103(a) as being unpatentable over Lee et al.

Yamashita et al. was relied upon to allegedly teach a FET which converts an electrostatic capacity to a voltage. However, Yamashita et al. clearly fails to teach or suggest "a first conductive portion disposed on the substrate on one side of the detecting electrode and a second conductive portion disposed on the substrate on the other side of the detecting electrode for inhibiting the deflection of said vibrating body in the Z-direction" as recited in the present claimed invention. Thus, Applicant respectfully submits that Yamashita et al. fails to cure the deficiencies of Lee et al. described above.

Accordingly, Applicant respectfully submits that Lee et al. and Yamashita et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements and method steps recited in claims 1, 9, 12, 15, and 16 of the present application. Claims 2-8 depend upon claim 1 and are therefore allowable for at least the reasons that claim 1 is allowable. Claims 10 and 11 depend upon claim 9 and are therefore allowable for at least the reasons that claim 9 is allowable. Claims 13, 14, 17, and 19 depend upon claim 12 and are therefore allowable for at least the reasons that claim 12 is allowable. Claims 18 and 20 depend upon claim 15 and are therefore allowable for at least the reasons that claim 15 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a THREE-month extension of time, extending to November 6, 2003, the period for response to the Office Action dated May 6, 2003.

Serial No. 09/730,461
October 30, 2003
Reply to the Office Action dated May 6, 2003
Page 13 of 13

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: October 30, 2003


Attorneys for Applicants

Joseph R. Keating
Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710

KEATING & BENNETT LLP
10400 Eaton Place, Suite 312
Fairfax, VA 22030
Telephone: (703) 385-5200
Facsimile: (703) 385-5080